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10/524,695	05/25/2005	Stephen W Vorley	CU-4085 RJS	1593
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224 SOUTH MICHIGAN AVENUE			RIPLEY, JAY R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.	Applicant(s)	
10/524,695	VORLEY ET AL.	
Examiner	Art Unit	
JAY R. RIPLEY	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS,

- WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a repty be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.

Any	reply received by the C		y will, by statute, cause the application to become ABANCONED (35 0.3.0., § 135). s after the mailing date of this communication, even if timely filed, may reduce any	
Status				
1)🛛	Responsive to	communication(s) fi	led on <u>09 June 2009</u> .	
2a)⊠	This action is F	INAL.	2b) This action is non-final.	
3)	Since this appli	cation is in condition	n for allowance except for formal matters, prosecution as to the merits is	
	closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.			
Disposit	ion of Claims			
4)🛛	Claim(s) <u>6-22</u> is	s/are pending in the	application.	
	4a) Of the abov	e claim(s) <u>6-20</u> is/ar	re withdrawn from consideration.	
5)	Claim(s)	is/are allowed.		

Application Papers

9) The specification is objected to by the Examiner.

8) Claim(s) _____ are subject to restriction and/or election requirement.

6)⊠ Claim(s) <u>21 and 22</u> is/are rejected. 7)□ Claim(s) _____ is/are objected to.

a) All b) Some * c) None of:

10) ☐ The drawing(s) filed on 15 February 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

1.	Certified copies of the priority documents have been received.
2.	Certified copies of the priority documents have been received in Application No
3.	Copies of the certified copies of the priority documents have been received in this National Stage
	application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Attachment(s)		
Notice of References Cited (PTO-892) Notice of Draftsperson's Patient Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO/95/08) Paper No(s)Mail Date Pager No	4) Interview Summary (PTO-413) Paper Nots/Mail Date. 5) I Actince of Informal Patent Application 6) Other: <u>Attachments A-H.</u>	

DETAILED ACTION

Claims 6-22 are pending. Claims 6-20 have been withdrawn. Claims 1-5, 23, and 24 have been cancelled.

Election/Restrictions

Claims 6-9 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 08/08/2007.

Claims 10-20 stand withdrawn by Applicants in response to the Office action mailed 03/18/2008, said Office action noting that claims 10-20 are not drawn to the elected invention

Drawings

The drawings are objected to due to extraneous matter is in drawing sheets 6, 8 and 10, e.g. "Cross section 3-3" and similar.

The drawings are objected to due to improper material representative crosshatching in original Figures 4-9, e.g. the cross-hatching of consisting sets of two closely spaces parallel lines is improper as observed for part "15" in original Figure 6.

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The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claim 21, it is recited in lines 15-17, "the second flange of the second pipe end comprising a concentric press surface located <u>immediately proximal to the periphery of the pipe end</u>" (emphasis added) must be shown or the feature(s) canceled from the claim(s). The term "proximal" means "near". The phrase "immediately proximal to the periphery" requires a structure not part of the "periphery", but merely near the periphery. As can clearly be observed in original Figure 5, for example, the radial press surface part 23, part 23 being the structure the noted recitation appears to be drawn to, is not "immediately proximal to the periphery of the pipe end", but is a monolithic constituent of the radial "periphery of the pipe end". No new matter should be entered.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of the claim 22, lines 1-5, recitation of "wherein the external toothed periphery of the rotatable threaded collar is designed to be able to take an axial pressure from the preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange" (emphasis added) must be shown or the feature(s) canceled from the claim(s). Nowhere in the original disclosure is there any teaching that the "external toothed periphery of the rotatable threaded collar", part "15" being the "threaded collar" and part "21" being the teeth (see the instant disclosure Figure 9, for example), takes any "axial pressure from the preloading tool". No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filling date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 21 is objected to because the recitation in line 19 of "a second end portion wherein the first end" should be --a second end portion, wherein the first end--, a comma added between the term "portion" and the term "wherein".

Appropriate correction is required.

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Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. There is no support in the original disclosure for the claim 22, lines 1-5, recitation of "wherein the external toothed periphery of the rotatable threaded collar is designed to be able to take an axial pressure from the preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange". Nowhere in the original disclosure is there any teaching that the "external toothed periphery of the rotatable threaded collar", part "15" being the "threaded collar" and part "21" being the teeth (see the instant disclosure Figure 9, for example), takes any "axial pressure from the preloading tool".

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 21, it is recited in lines 3-4, "a seal located between the first pipe end and the first flange and the second pipe end and the second flange". The noted recitation is inaccurate and/or misdescriptive, since there is no original disclosure of a "seal" structure that is located "between" the "first pipe end", the "first flange", the "second pipe end" and the "second flange". Furthermore, since the "the first pipe end and the first flange" is shown as a monolithic structure and "the second pipe end and the second flange" is shown as a monolithic structure, it is unclear as to how a "seal" could be positioned "between" the "first pipe end and the first flange" and also "between" the "second pipe end and the second flange". It appears to the Examiner that the Applicants intend the noted recitation to simply indicate that the "seal" is located between the "first flange" and the "second flange". If such is the case, the Applicants should amend the language of claim 21 to simply recite such.

In regard to claim 21, it is recited in lines 9-11, "the first flange of the first pipe end comprising a nut comprising a rear end portion arranged with an internal load bearing surface corresponding to the first flange" (emphasis added). It is unclear as to how the "first flange", which is recited to comprise the "nut" in the underlined recitation, can have some portion of itself further having some surface in relation to itself

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as indicated by the emboldened recitation. The "first flange" cannot have a "surface corresponding to the first flange".

In regard to claim 21, it is recited in lines 9-14, "the first flange of the first pipe end comprising a nut comprising a rear end portion arranged with an internal load bearing surface corresponding to the first flange, an opposing end portion arranged with an external flange of the nut designed to be able to take an axial pressure from a preloading tool, and a mid portion therebetween comprising an internal threaded portion" (emphasis added). Due to the punctuation, it is unclear as to what recited structure the noted italicized recited structural limitations are intended to pertain to, i.e. the "first flange" or the "nut". It appears based upon the original disclosure that the "nut" has "an opposing end portion arranged with an external flange" that may be described as being "designed to be able to take an axial pressure from a preloading tool" and a "mid portion therebetween comprising an internal threaded portion". If the Applicants intend to place the noted italicized limitations upon the structure of the "nut", the Applicants should more clearly indicate such by reciting --the first flange of the first pipe end comprising a nut; said nut comprising a rear end portion arranged with an internal load bearing surface corresponding to the first flange, an opposing end portion arranged with an external flange of the nut designed to be able to take an axial pressure from a preloading tool, and a mid portion therebetween comprising an internal threaded portion-- or such. The Applicants are reminded of the clarity issue involving the "first flange" comprising "the nut" as indicated above.

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In regard to claim 21, it is recited in lines 15-17, "the second flange of the second pipe end comprising a concentric press surface located immediately proximal to the periphery of the pipe end" (emphasis added). The noted recitation is inaccurate and/or misdescriptive. The term "proximal" means "near". The phrase "immediately proximal to the periphery" requires a structure not part of the "periphery", but merely near the periphery. As can clearly be observed in original Figure 5, for example, the radial press surface part 23, part 23 being the structure the noted recitation appears to be drawn to, is not "immediately proximal to the periphery of the pipe end", but is a monolithic constituent of the radial "periphery of the pipe end". Also note above objection to the drawings concerning the noted recited structure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

As best understood, claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al (U.S. 2002/0113438) in view of Zentner et al (U.S. 5,058,929) or Brown (U.S. 3,353,847).

In regard to claims 21-22, Lynn et al disclose a pipe connector for connecting two pipes, comprising a first pipe end (as observed in Figure 2, see Attachment A) comprising a first flange, a second pipe end (as observed in Figure 2, see Attachment

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A) comprising a second flange, and a seal (as observed in Figure 2, see Attachment A) located between the first pipe end and the first flange and the second pipe end and the second flange,

the first flange of the first pipe end comprising a nut (as observed in Figure 2, see Attachment A) comprising a rear end portion arranged with an internal load bearing surface (as observed in Figure 2, see Attachment A) corresponding to the first flange, an opposing end portion arranged with an external flange (as observed in Figure 2, see Attachment A) of the nut designed to be able to take an axial pressure from a preloading tool (any structure can take an "axial pressure" from some tool), and a mid portion (as observed in Figure 2, see Attachment A) therebetween comprising an internal threaded portion; and

the second flange of the second pipe end comprising a concentric press surface (shaded as observed in Figure 2, see Attachment A; the Examiner notes that any surface can be considered a "press surface" that is "capable of taking an axial pressure from" some "preloading tool") located immediately proximal to the periphery of the pipe end and designed to be capable of taking an axial pressure from the preloading tool, and a rotatable threaded collar (as observed in Figure 2, see Attachment A) having a first end portion (as observed in Figure 2, see Attachment A) and a second end portion (as observed in Figure 2, see Attachment A) the second end portion is threaded and configured to engage the internal threaded portion of the nut of the first flange.

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Lynn et al disclose the claimed invention except for the first end portion having an external toothed periphery. The Examiner notes that any surface structure is able to take an "axial pressure" from some "preloading tool" and that the claim 22, lines 3-5, recitation of "which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange" is drawn to some intended use, intended uses are given little patentable weight. The Examiner notes that Lynn et al teach a variety of structures in Figures 12-15, see Attachments B-C, for threadably engaging and tightening the "threaded collar". The Examiner also notes that the invention of Lynn et al is generally deemed to be a "union pipe connector".

Zentner et al teach a mechanized fluid connector and assembly tool system as observed in Figures 2A, 2B, and 4, see Attachments D and E. The connector of Zentner comprises: a first pipe end having a flange, a second pipe end having a flange, a nut having internal threads and an internal load bearing surface, and a seal located between the two pipe ends. The connector of Zentner also has a threaded collar having an external toothed periphery, the tooth periphery for operating the threaded collar in a rotational manner by a power tool. Zentner specifically teaches in column 2, indicated lines 48-55, "The plumbing union may be conventionally attached to the respective pipe segments to be joined in a fluid-tight relationship. As in a prior art plumbing union, a rotatable threaded member working against a threaded ferrule draws the pipe segment interfaces together. Additional structure provided in the pipe connector assembly includes a gear toothed periphery on the rotatable member (annular retainer)"

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(emphasis added), indicating that the concept of modifying a prior art union connector by adding an external toothed periphery is not new.

Brown teaches a powered quick coupling device, i.e. a pipe connector, as observed in Figure 2 in Attachment F. The invention of Brown comprises a threaded collar with an external toothed periphery for operating the threaded collar in a rotational manner by a power tool, as discussed by Brown in column 2, indicated lines 52-67.

As Zentner and Brown relate to pipe connectors, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe connector of Lynn et al by providing the threaded collar with an external toothed periphery as taught by Zentner and Brown for operating the threaded collar in a rotational manner by a power tool.

As best understood, claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edwards (U.S. 6.254.147).

In regard to claims 21-22, Edwards discloses a pipe connector for connecting two pipes, comprising a first pipe end (as observed in Figure 1, see Attachment G) comprising a first flange, a second pipe end (as observed in Figure 1, see Attachment G) comprising a second flange, and a seal (as observed in Figure 1, see Attachment G) located between the first pipe end and the first flange and the second pipe end and the second flange.

the first flange of the first pipe end comprising a nut (as observed in Figure 1, see Attachment G) comprising a rear end portion (any arbitrarily "portion" may be chosen as

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long as the claim limitations are met: as observed in Figure 1, see Attachment H) arranged with an internal load bearing surface (a portion of the threads part "24" interact with a portion of the threads part "24" and constitute an "internal load bearing surface"; see column 5, indicated lines 16-34, for a discussion of the noted parts) corresponding to the first flange, an opposing end portion (as observed in Figure 1, see Attachment H; any arbitrarily "portion" may be chosen as long as the claim limitations are met) arranged with an external flange (as observed in Figure 1, see Attachment G) of the nut designed to be able to take an axial pressure from a preloading tool (the noted flange is capable of taking (any surface is "capable of taking an axial pressure from" some "preloading tool") and comprising an internal threaded portion (the internal thread part "26" as observed in Figure 1, see Attachment H); and

the second flange of the second pipe end comprising a concentric press surface (as observed in Figure 1, see Attachment G) located immediately proximal to the periphery of the pipe end and designed to be capable of taking an axial pressure from the preloading tool (any surface is "capable of taking an axial pressure from" some "preloading tool"), and a rotatable threaded collar (as observed in Figure 1, see Attachment G; the Examiner notes that parts and "26" are threads, see column 5, indicated lines 16-22) having a first end portion and a second end portion wherein the first end portion has an external toothed periphery (the "toothed periphery" as observed in Figures 1 and 2, see Attachment H) and the second end portion is threaded (by threads part "26" as observed in Figure 1, see Attachment H; see column 5, indicated lines 16-22) and configured to engage the internal threaded portion (internal threaded

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portion part "26" as observed in Figure 1, see Attachment H) of the nut of the first flange (as observed in Figure 1, see Attachment H);

wherein the external toothed periphery of the rotatable threaded collar is designed to be able to take an axial pressure from the preloading tool (as much as the Applicants "collar is designed to be able to take an axial pressure from" some "preloading tool"), which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange (the Examiner notes that the recitation of "which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange" is drawn to some intended use and as such is given little patentable weight; "the external toothed periphery of the rotatable threaded collar" of Edwards is as able of taking an axial pressure from" some "preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange" as the Applicants "external toothed periphery of the rotatable threaded collar" is).

Edwards discloses the claimed invention except for a threaded mid portion between the opposing end portion of the nut and the rear end portion of the nut being internally threaded, with the second end portion of the second flange of the second pipe threads engaging the threaded mid portion. The Examiner notes that such a "threaded mid portion" merely requires the threads of part "26" and part "26" be axially extended towards the "rear end portion of the nut", with the complimentary threads of the second flange of the second pipe end being extended also. It would have been obvious to one

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having ordinary skill in the art at the time the invention was made to at least try modifying the pipe connector of Edwards by axially extending the threads of the opposing end portion the nut and the second end portion of the second flange of the second pipe towards the rear end portion of the nut to increase the axial pullout strength of the pipe connection with the full expectation of a stronger pipe connection that still functions as Edwards intended, since such a modification is simply an optimization of proportions, i.e. the axial length of respective engaging threads, and the optimization of proportions in a prior art device is a design consideration within the skill of the art. *In re Reese*. 290 F.2d 839, 129 USPQ 402 (CCPA 1961).

Response to Arguments

Applicant's arguments filed 06/09/2009 have been fully considered.

Applicant's arguments with respect to claims 21-22 have been considered but are moot in view of the new ground(s) of rejection. New grounds of rejection are at least due to the following amended claim language: in claim 21, lines 1-4, the recitation of "a first pipe end... flange"; in claim 21, line 9, the recitation of "the first flange... comprising"; and in claim 21, lines 15-17, the recitation of "comprising a concentric... tool". New grounds of rejection under 35 U.S.C. 103 over the prior art of Lynn et al (U.S. 2002/0113438) in view of Zentner et al (U.S. 5,058,929) or Brown (U.S. 3,353,847) and over the prior art of Edwards (U.S. 6,254,147) are advanced above.

Concerning the Applicants discussion in pages 6-7, starting in the third full paragraph in page 6, of the reply filed 06/09/2009, that the objection to the specification,

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drawing objection, and 35 U.S.C. 112, first paragraph, rejection due to the claim 22, lines 1-5, recitation of "wherein the external toothed periphery of the rotatable threaded collar is designed to be able to take an axial pressure from the preloading tool, which pressure is distributed evenly or point-by-point about the periphery of the collar and directed towards the pipe flange" (emphasis added), the arguments are not persuasive.

In page 9, the third full paragraph, paragraph lines 4-10, Applicants "respectfully directs the Examiner's attention to page 11, lines 1-2 of the original application disclosing that the preloading tool 25 has a cogwheel 49 of the nut runner 45 'that corresponds to the teeth 21 on the threaded collar 15' and that 'when the threaded collar 15 has been tightened, the pressure on the preloading tool 25 is relieved, so as to transfer the load to the nut 5 and the threaded collar 15'. (See original disclosure page 12, lines 1-5.) This feature is also disclosed, for instance in Figure 7 of the disclosure." The Examiner fails to see how the noted teachings disclose and provide support for the claim 22 recitation of "wherein the external toothed periphery of the rotatable threaded collar is designed to be able to take an axial pressure from the preloading tool" (emphasis added). At best, the noted teachings only provide support for the "rotatable threaded collar" being "designed to be able to take an axial pressure from the preloading tool", not the constituent part of the "external toothed periphery". Further, in none of the original drawings does the "external toothed periphery of the rotatable threaded collar" make any direct contact with the nut "5" nor any other structure that would lead one to believe that the "external toothed periphery of the rotatable threaded

collar" in some form or fashion "is designed to be able to take an axial pressure from the preloading tool". The arguments are not persuasive and the objection to the specification, drawing objection, and 35 U.S.C. 112, first paragraph rejection stand.

Conclusion

Applicant's amendment (the following amended claim language: in claim 21, lines 1-4, the recitation of "a first pipe end... flange"; in claim 21, line 9, the recitation of "the first flange... comprising"; and in claim 21, lines 15-17, the recitation of "comprising a concentric... tool") necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY R. RIPLEY whose telephone number is (571)272-

7535. The examiner can normally be reached on Monday through Friday, 1:30 P.M. - 10:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jay R Ripley/ Examiner, Art Unit 3679 09 Aug 2009

/Daniel P. Stodola/ Supervisory Patent Examiner, Art Unit 3679